

REMARKS

Reconsideration and withdrawal of the rejections set forth in the Office Action dated October 4, 2005, is respectfully requested in view of this amendment. By this amendment, claims 44-45, 50-51, 57, and 59-61 have been amended, and claim 49 has been cancelled. Claims 1-48 and 50-78 are pending in this application, with claims 1-43 and 62-78 withdrawn from consideration.

Claims 44-45 and 59-61 have been amended to clarify that the inner surface carries electronic elements. Support to this amendment can be found in the description, for example, page 14, lines 11 through 17 (paragraph [0051]). It is respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. §132.

In the outstanding Office Action, the Examiner rejected claims 44-61 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 44-61 were rejected under 35 U.S.C. §102(b) as anticipated by Kemeny (US 6,515,346). These rejections, as applied to the revised claims, are respectfully traversed.

Rejections Under 35 U.S.C. §112

The Examiner rejected claims 44-61 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the recitation regarding the patterning of a ring-like or cylindrical semiconductor element with features of the semiconductor device was deemed vague. Claims 44-45 and 59-61 have been amended to clarify that the inner surface carries electronic elements. Hence, Applicant submits that the rejections of claims 44-45 and 59-61 under 35 U.S.C. §112 are overcome. Applicant therefore requests reconsideration and withdrawal of this rejection.

Rejections under 35 USC §102

The Examiner rejected Claims 44-61 under 35 U.S.C. 102(b) as being anticipated by Kemeny. Kemeny is cited as showing a semiconductor device formed to comprise an elongated element with a central perforation, with semiconductor features formed in the central perforation.

Applicant submits that amended claims overcome this rejection for the following reasons:

Anticipation under 35 U.S.C. §102 requires that each and every claimed feature be disclosed by a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicants submit that Kemeny fails to disclose each and every element of the claims as required under 35U.S.C. §102. The present invention as defined in amended independent claim 44, 45 and 59-61 relates to an integrated semiconductor device and to an electronic circuit comprising a plurality (at least two) such semiconductor devices, respectively:

Claim 44 defines

"... providing a semiconductor element having a perforation ... defining a central channel ... processing an inner surface of said perforation via the central channel to form features of the semiconductor device ... on said inner surface; and providing contact elements on substantially flat surface of a butt-end of the semiconductor element, the contact elements being connected to said inner surface."

Claim 45 defines

"... a semiconductor element having a perforation extending along a central axis ... said inner surface carrying electronic elements; and contact elements arranged on a substantially flat surface of a butt-end of the semiconductor element, the contact elements being connected to said inner surface."

As recited in independent claims 44 and 45, the integrated semiconductor device includes a semiconductor element having a perforation extending along a central axis thereof. The perforation defines an inner surface of the semiconductor element. The inner surface carries electronic elements. In order to clarify the features of the invention, the independent claims have been amended to recite that the integrated semiconductor device further includes contact elements arranged on a substantially flat surface of a butt-end of the semiconductor element. The contact elements are connected to the inner surface of the semiconductor element.

Kemeny fails to disclose these features. Specifically, Kemeny does not disclose contact elements arranged on a butt-end of the semiconductor element, which are connected to the inner surface of the element. The contact elements used by Kemeny are the bumps 15 or 61 as shown in Figs. 1, 5 or 61, which are arranged over the IC and separated by insulating layer (see, for example, col. 4, lines 5-8 and col. 6, lines 36-38).

Applicant thus respectfully submits that amended independent claims 44, 45 and 59-61 are new and patentably distinguished over Kemeny.

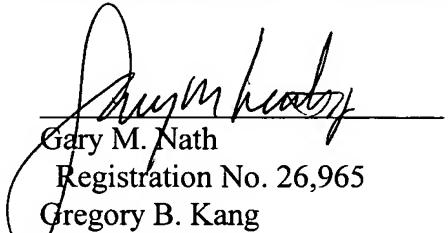
The remaining dependent claims all relate to the device recited in Claim 45 or to the electronic circuit recited in claim 57, and are therefore also patentable over Kemeny.

It is therefore respectively submitted that the rejection under 35 USC § 102(b) should be withdrawn.

CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner call the undersigned.

Respectfully submitted,
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